RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/563,270_

Source: _1Fwp_

Date Processed by STIC: _1/13/06_

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IFWP

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/563,270

DATE: 01/13/2006
TIME: 10:16:00

Input Set : **A:\pto.da.txt**
Output Set: **N:\CRF4\01132006\J563270.raw**

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  5 <110> APPLICANT: Monsanto Technology LLC
  7        Baum, James A.
  8        Donovan, Judith C.
 10        Donovan, William P.
 12        Engleman, James T.
 14        Krasomil-Osterfeld, Karina
 16        Pitkin, John W.
 18        Roberts, James K.
 22 <120> TITLE OF INVENTION: Insecticidal Proteins Secreted From Bacillus Thuringiensis
and Uses
 23        Therefor
 27 <130> FILE REFERENCE: 38-21(52806)B
C--> 30 <140> CURRENT APPLICATION NUMBER: US/10/563,270
C--> 30 <141> CURRENT FILING DATE: 2006-01-04
 30 <150> PRIOR APPLICATION NUMBER: PCT/US04/21692
 32 <151> PRIOR FILING DATE: 2004-07-06
 35 <150> PRIOR APPLICATION NUMBER: US 60/485,483
 37 <151> PRIOR FILING DATE: 2003-07-07
 41 <160> NUMBER OF SEQ ID NOS: 33
 45 <170> SOFTWARE: PatentIn version 3.1
 49 <210> SEQ ID NO: 1
 51 <211> LENGTH: 15
 53 <212> TYPE: PRT
 55 <213> ORGANISM: Bacillus thuringiensis
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 67 <211> LENGTH: 45
 69 <212> TYPE: DNA
 71 <213> ORGANISM: Artificial Sequence
 75 <220> FEATURE:
 77 <223> OTHER INFORMATION: tic gene probe encoding SEQ ID NO 1
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 85 <211> LENGTH: 1253
 87 <212> TYPE: DNA
 89 <213> ORGANISM: Bacillus thuringiensis
 93 <220> FEATURE:
 95 <221> NAME/KEY: CDS
 97 <222> LOCATION: (153)..(1253)
 99 <223> OTHER INFORMATION:
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P.6

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108 aaagcgttat caagagtgat ggagggataa tt atg aaa aat aga ttt tca aaa       173
109                                    Met Lys Asn Arg Phe Ser Lys
110                                    1                   5
112 gtg gca tta tgc acc gta ccg att tta atg gtt tct aca ttc gcc agt      221
113 Val Ala Leu Cys Thr Val Pro Ile Leu Met Val Ser Thr Phe Ala Ser
114         10                  15                  20
116 tca agc atg tca gct ttt gct gca gaa gcc aaa tca cca gat tta aat      269
117 Ser Ser Met Ser Ala Phe Ala Ala Glu Ala Lys Ser Pro Asp Leu Asn
118         25                  30                  35
120 gta tct caa caa gta ata ggt ccc tat gcc gaa tct tat att gat att      317
121 Val Ser Gln Gln Val Ile Gly Pro Tyr Ala Glu Ser Tyr Ile Asp Ile
122 40                  45                  50                  55
124 gtg cag gat aga atg aaa caa agg gat aag gga tca aaa tta act ggt      365
125 Val Gln Asp Arg Met Lys Gln Arg Asp Lys Gly Ser Lys Leu Thr Gly
126                 60                  65                  70
128 aaa cca ata aat atg caa gaa caa ata ata gat ggg tgg ttt cta gct      413
129 Lys Pro Ile Asn Met Gln Glu Gln Ile Ile Asp Gly Trp Phe Leu Ala
130             75                  80                  85
132 aga ttt tgg ata ttt aag gat caa aac aat aac cat cag aca aat aga      461
133 Arg Phe Trp Ile Phe Lys Asp Gln Asn Asn Asn His Gln Thr Asn Arg
134             90                  95                  100
136 ttt ata tcc tgg ttt aaa gat aat att gct agt tca aaa ggg tat aat      509
137 Phe Ile Ser Trp Phe Lys Asp Asn Ile Ala Ser Ser Lys Gly Tyr Asn
138         105                 110                 115
140 agt att gcg gag caa atg ggt tta aaa ata gaa gca gaa aac gat atg      557
141 Ser Ile Ala Glu Gln Met Gly Leu Lys Ile Glu Ala Glu Asn Asp Met
142 120                 125                 130                 135
144 gat gta aca aat ata gat tat aca tct aag aca ggc gat acc att tat      605
145 Asp Val Thr Asn Ile Asp Tyr Thr Ser Lys Thr Gly Asp Thr Ile Tyr
146             140                 145                 150
148 aat ggt att tca gaa ttg aaa aat tat aca gga tca act caa aag atg      653
149 Asn Gly Ile Ser Glu Leu Lys Asn Tyr Thr Gly Ser Thr Gln Lys Met
150             155                 160                 165
152 aaa aca gat agt ttt caa aga gat tat aca aaa tca gaa tct act tca      701
153 Lys Thr Asp Ser Phe Gln Arg Asp Tyr Thr Lys Ser Glu Ser Thr Ser
154             170                 175                 180
156 gta act aat gga tta caa tta gga ttt aaa gtt gct gct aaa gga gta      749
157 Val Thr Asn Gly Leu Gln Leu Gly Phe Lys Val Ala Ala Lys Gly Val
158             185                 190                 195
160 gtt gct ttg gct ggg gca gac ttt gaa acc agt gtt act tat aat cta      797
161 Val Ala Leu Ala Gly Ala Asp Phe Glu Thr Ser Val Thr Tyr Asn Leu
162 200                 205                 210                 215
164 tca act act aca act gaa aca aat aca ata tca gac aag ttt act gtc      845
165 Ser Thr Thr Thr Thr Glu Thr Asn Thr Ile Ser Asp Lys Phe Thr Val
166             220                 225                 230
168 cca tct caa gaa gtt aca ttg cct cca gga cat aaa gcg ata gtg aaa      893
169 Pro Ser Gln Glu Val Thr Leu Pro Pro Gly His Lys Ala Ile Val Lys
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RAW SEQUENCE LISTING   DATE: 01/13/2006
PATENT APPLICATION: US/10/563,270   TIME: 10:16:00

Input Set : **A:\pto.da.txt**
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170                 235                240                245
172 cat gat tta aga aaa atg gtt tat tct ggt act cat gat cta aag ggt      941
173 His Asp Leu Arg Lys Met Val Tyr Ser Gly Thr His Asp Leu Lys Gly
174         250                255                260
176 gat tta att gtg agt ttt aat gat aaa gag att gta caa aaa ttt att      989
177 Asp Leu Ile Val Ser Phe Asn Asp Lys Glu Ile Val Gln Lys Phe Ile
178         265                270                275
180 tat cca aat tat aga gaa att aat tta tct gat atc cgt gaa act atg     1037
181 Tyr Pro Asn Tyr Arg Glu Ile Asn Leu Ser Asp Ile Arg Glu Thr Met
182 280                285                290                295
184 att gaa att gat gaa tgg aat cat gta aac cct gtg aat ttt tat gaa     1085
185 Ile Glu Ile Asp Glu Trp Asn His Val Asn Pro Val Asn Phe Tyr Glu
186                 300                305                310
188 tta gtt ggg gtc aaa aat cat ata aaa aat ggt gaa act ttg tat ata     1133
189 Leu Val Gly Val Lys Asn His Ile Lys Asn Gly Glu Thr Leu Tyr Ile
190                 315                320                325
192 gat act cca gct aaa ttt atg ttt aat ggt gct aat cca tat tat aga     1181
193 Asp Thr Pro Ala Lys Phe Met Phe Asn Gly Ala Asn Pro Tyr Tyr Arg
194         330                335                340
196 gca aca ttt aca gaa tac gac ggg aat aat aat cct gtt caa aca aag     1229
197 Ala Thr Phe Thr Glu Tyr Asp Gly Asn Asn Asn Pro Val Gln Thr Lys
198         345                350                355
200 gta tta agt gaa aac ttt aaa ttg                                     1253
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202 360                365
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207 <211> LENGTH: 367
209 <212> TYPE: PRT
211 <213> ORGANISM: Bacillus thuringiensis
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221 Met Val Ser Thr Phe Ala Ser Ser Met Ser Ala Phe Ala Ala Glu
222         20                 25                 30
225 Ala Lys Ser Pro Asp Leu Asn Val Ser Gln Gln Val Ile Gly Pro Tyr
226         35                 40                 45
229 Ala Glu Ser Tyr Ile Asp Ile Val Gln Asp Arg Met Lys Gln Arg Asp
230     50                 55                 60
233 Lys Gly Ser Lys Leu Thr Gly Lys Pro Ile Asn Met Gln Glu Gln Ile
234 65                 70                 75                 80
237 Ile Asp Gly Trp Phe Leu Ala Arg Phe Trp Ile Phe Lys Asp Gln Asn
238                 85                 90                 95
241 Asn Asn His Gln Thr Asn Arg Phe Ile Ser Trp Phe Lys Asp Asn Ile
242                 100                105                110
245 Ala Ser Ser Lys Gly Tyr Asn Ser Ile Ala Glu Gln Met Gly Leu Lys
246         115                120                125
249 Ile Glu Ala Glu Asn Asp Met Asp Val Thr Asn Ile Asp Tyr Thr Ser
250         130                135                140
253 Lys Thr Gly Asp Thr Ile Tyr Asn Gly Ile Ser Glu Leu Lys Asn Tyr
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                    RAW SEQUENCE LISTING              DATE: 01/13/2006
                    PATENT APPLICATION:  US/10/563,270     TIME: 10:16:00

                    Input Set : A:\pto.da.txt
                    Output Set: N:\CRF4\01132006\J563270.raw
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254 145                   150                 155                 160
257 Thr Gly Ser Thr Gln Lys Met Lys Thr Asp Ser Phe Gln Arg Asp Tyr
258                   165                 170                 175
261 Thr Lys Ser Glu Ser Thr Ser Val Thr Asn Gly Leu Gln Leu Gly Phe
262                   180                 185                 190
265 Lys Val Ala Ala Lys Gly Val Val Ala Leu Ala Gly Ala Asp Phe Glu
266         195                 200                 205
269 Thr Ser Val Thr Tyr Asn Leu Ser Thr Thr Thr Glu Thr Asn Thr
270     210                 215                 220
273 Ile Ser Asp Lys Phe Thr Val Pro Ser Gln Glu Val Thr Leu Pro Pro
274 225                 230                 235                 240
277 Gly His Lys Ala Ile Val Lys His Asp Leu Arg Lys Met Val Tyr Ser
278                   245                 250                 255
281 Gly Thr His Asp Leu Lys Gly Asp Leu Ile Val Ser Phe Asn Asp Lys
282             260                 265                 270
285 Glu Ile Val Gln Lys Phe Ile Tyr Pro Asn Tyr Arg Glu Ile Asn Leu
286         275                 280                 285
289 Ser Asp Ile Arg Glu Thr Met Ile Glu Ile Asp Glu Trp Asn His Val
290     290                 295                 300
293 Asn Pro Val Asn Phe Tyr Glu Leu Val Gly Val Lys Asn His Ile Lys
294 305                 310                 315                 320
297 Asn Gly Glu Thr Leu Tyr Ile Asp Thr Pro Ala Lys Phe Met Phe Asn
298                   325                 330                 335
301 Gly Ala Asn Pro Tyr Tyr Arg Ala Thr Phe Thr Glu Tyr Asp Gly Asn
302             340                 345                 350
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306         355                 360                 365
309 <210> SEQ ID NO: 5
311 <211> LENGTH: 1621
313 <212> TYPE: DNA
315 <213> ORGANISM: Bacillus thuringiensis
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321 <221> NAME/KEY: CDS
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325 <223> OTHER INFORMATION:
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    334 tttatatagg tttcatctaa ttttcaagac atgtggttgt tttgcgtttt cttcttccaa    180
    336 atttgataaa tcaagctccc atattcatga atccagcgca taatgattgt gggatgaact    240
    338 gaaacatcac gatagcttaa agcaaaacga caatagtagc ggacggctac cataataata    300
    340 tcttgtttga actgtttccc tttaaaatat cacatttgtg attctcctcg atgctttttt    360
    342 tagagtgtag cttcatctag aacactttgc aatagaacca ttcctttgat atacaattaa    420
    344 accacattta tccttcatgg aatgtttata tattaaagaa tataaaaaaa catacgatgt    480
    346 tataattaat ttgaaagcgt taacaaaaat gaatgatgga gggataatt atg aaa tac    538
    347                                                       Met Lys Tyr
    348                                                        1
    350 aag ttt tca aaa gtc gtt aag tgt act tta cca gct tta atg att act    586
    351 Lys Phe Ser Lys Val Val Lys Cys Thr Leu Pro Ala Leu Met Ile Thr
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352      5                    10                   15
354 aca ttc gtt act cca agt atg gca gtt ttt gcc gca gaa acc aag tcg      634
355 Thr Phe Val Thr Pro Ser Met Ala Val Phe Ala Ala Glu Thr Lys Ser
356 20                   25                   30                   35
358 cca aat cta aat gca tct caa caa gca ata act cca tat gct gaa tct      682
359 Pro Asn Leu Asn Ala Ser Gln Gln Ala Ile Thr Pro Tyr Ala Glu Ser
360                  40                   45                   50
362 tat att gat act gtt caa gat aga atg aaa caa aga gat agg gaa tca      730
363 Tyr Ile Asp Thr Val Gln Asp Arg Met Lys Gln Arg Asp Arg Glu Ser
364              55                   60                   65
366 aaa cta act ggt aaa cca ata aat atg caa gaa caa ata ata gat gga      778
367 Lys Leu Thr Gly Lys Pro Ile Asn Met Gln Glu Gln Ile Ile Asp Gly
368          70                   75                   80
370 tgg ttt tta gct aga ttc tgg ata ttt aaa gat caa aat aac aat cat      826
371 Trp Phe Leu Ala Arg Phe Trp Ile Phe Lys Asp Gln Asn Asn Asn His
372      85                   90                   95
374 caa aca aat aga ttt ata tcc tgg ttt aaa gat aat ctt gct agt tcg      874
375 Gln Thr Asn Arg Phe Ile Ser Trp Phe Lys Asp Asn Leu Ala Ser Ser
376 100                  105                  110                  115
378 aag ggg tat gac agt ata gca gaa caa atg ggc tta aaa ata gaa gca      922
379 Lys Gly Tyr Asp Ser Ile Ala Glu Gln Met Gly Leu Lys Ile Glu Ala
380                  120                  125                  130
382 tta aat gat atg gat gta aca aat att gat tat aca tct aaa aca ggt      970
383 Leu Asn Asp Met Asp Val Thr Asn Ile Asp Tyr Thr Ser Lys Thr Gly
384              135                  140                  145
386 gat acc ata tat aat gga att tct gaa cta aca aat tat aca gga aca      1018
387 Asp Thr Ile Tyr Asn Gly Ile Ser Glu Leu Thr Asn Tyr Thr Gly Thr
388          150                  155                  160
390 acc caa aaa atg aaa acc gat agt ttt caa aga gat tat aca aaa tct      1066
391 Thr Gln Lys Met Lys Thr Asp Ser Phe Gln Arg Asp Tyr Thr Lys Ser
392      165                  170                  175
394 gaa tcc act tca gta aca aat ggg tta caa tta gga ttt aaa gtt gct      1114
395 Glu Ser Thr Ser Val Thr Asn Gly Leu Gln Leu Gly Phe Lys Val Ala
396 180                  185                  190                  195
398 gct aag gga gta gtt gca tta gca ggt gca gat ttt gaa aca agt gtt      1162
399 Ala Lys Gly Val Val Ala Leu Ala Gly Ala Asp Phe Glu Thr Ser Val
400                  200                  205                  210
402 acc tat aat tta tca tct act aca act gaa aca aat aca ata tcg gat      1210
403 Thr Tyr Asn Leu Ser Ser Thr Thr Thr Glu Thr Asn Thr Ile Ser Asp
404              215                  220                  225
406 aag ttt act gtt cca tct caa gaa gtt aca tta tcc cca gga cat aaa      1258
407 Lys Phe Thr Val Pro Ser Gln Glu Val Thr Leu Ser Pro Gly His Lys
408          230                  235                  240
410 gca gtg gtg aaa cat gat ttg aga aaa atg gtg tat ttt ggg act cat      1306
411 Ala Val Val Lys His Asp Leu Arg Lys Met Val Tyr Phe Gly Thr His
412      245                  250                  255
414 gat tta aag ggt gat tta aaa gta ggt ttt aat gat aaa gag att gta      1354
415 Asp Leu Lys Gly Asp Leu Lys Val Gly Phe Asn Asp Lys Glu Ile Val
416 260                  265                  270                  275
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 01/13/2006
PATENT APPLICATION: US/10/563,270   TIME: 10:16:01

Input Set : A:\pto.da.txt
Output Set: N:\CRF4\01132006\J563270.raw

Please Note:
**Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.**

Seq#:26; N Pos. 3,9
Seq#:27; N Pos. 6,24
Seq#:28; N Pos. 6
Seq#:29; N Pos. 18

VERIFICATION SUMMARY   DATE: 01/13/2006
PATENT APPLICATION: US/10/563,270   TIME: 10:16:01

Input Set : **A:\pto.da.txt**
Output Set: **N:\CRF4\01132006\J563270.raw**

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L:30 M:270 C: Current Application Number differs, Replaced Current Application No
L:30 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:103 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:3,Line#:99
L:329 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:5,Line#:325
L:567 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:7,Line#:563
L:803 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:9,Line#:799
L:1080 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:13,Line#:1076
L:1451 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:1473 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:1495 M:259 W: Allowed number of lines exceeded, <223> Other Information:
L:1539 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0
L:1578 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0
L:1607 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0
L:1636 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0
L:1659 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:30,Line#:1655
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